CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.12/RS/CEMENT/2013-14

Date: 29.07.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
AGENCY	:	**Mr. R. Shivaram,** Contractor, Bangalore.
NAME OF THE WORK	:	Construction of RCC drains at Kammagondanahalli Stephens School, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	:	BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 27.07.2013
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	31.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	490 Minutes	Not More than 600 Minutes
3	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm

Note:

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CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.12/RS/SAND/2013-14 : 29.07.2013

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

Agency : **Mr. R. Shivaram,** Contractor, Bangalore.

Name of Work : Construction of RCC drains at Kammagondanahalli Stephens School, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 27.07.2013

Date of Testing : 29.07.2013

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	92	4.60	4.60	95.4	90-100
2.36	205	10.25	14.85	85.2	75-100
1.18	498	24.90	39.75	60.3	55-90
600 Micron	480	24.00	63.75	36.3	35-59
300 Micron	450	22.50	86.25	13.8	8-30
150 Micron	198	9.90	96.15	3.8	0-10

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Job No.: CTCE/BBMP/W.No.12/RS/AGG/2013-14 : 29.07.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

Agency : **Mr. R. Shivaram,** Contractor, Bangalore.

Name of Work : Construction of RCC drains at Kammagondanahalli Stephens School, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 27.07.2013

Date of Testing : 29.07.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **26000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	1020	3.92	3.92	96.08	95-100
20	16245	62.48	66.40	33.60	30-70
10	5240	20.15	86.56	13.44	10-35
4.75	2610	10.04	96.60	3.40	0-5

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Job No.: CTCE/BBMP/W.No.12/RS/AGG/2013-14 : 29.07.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

Agency : **Mr. R. Shivaram,** Contractor, Bangalore.

Name of Work : Construction of RCC drains at Kammagondanahalli Stephens School, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 27.07.2013

Date of Testing : 29.07.2013

Material : 20mm Aggregates

Total Wt. of Aggregates in gms= **5000**

Tabel - 1

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	150	3.00	3.0	97.00	95-100
10	3250	65.00	68.0	32.00	25-55
4.75	1250	25.00	93.0	7.00	0-10

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.12/RS/STEEL/2013-14 29.07.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
Agency	:	**Mr. R. Shivaram,** Contractor, Bangalore.
Name of the Work	:	Construction of RCC drains at Kammagondanahalli Stephens School, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 27.07.2013
Date of Test	:	29.07.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.25	O.K	O.K

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.12/RS/CUBE/2013-14

27.08.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
Agency	: **Mr. R. Shivaram,** Contractor, Bangalore.
Name of the work	: Construction of RCC drains at Kammagondanahalli Stephens School, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 27.07.2013
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	30.07.2013	27.08.2013	8.452	528.3	23.48
2	30.07.2013	27.08.2013	8.398	502.5	22.33
3	30.07.2013	27.08.2013	8.254	480.5	21.36

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Job No.: CTCE/BBMP/W.No.12/RS/Pre slab/2013-14

12.08.2013

TEST REPORT ON CONCRETE CORE (PRE CAST SLAB)

Name of Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
Name of Agency	:	**Mr. R. Shivaram,** Contractor, Bangalore.
Name of work	:	Construction of RCC drains at Kammagondanahalli Stephens School, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/SSD/DZ/PR/2013-14 Dated: 27.07.2013
No.of Sample Tested	:	03
Date of Testing	:	12.08.2013
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	81.00	0.398	2502.47	1.62	0.960	32.05	16.32	17.63	16.92	21.15
2	50.00	82.00	0.405	2515.42	1.64	0.965	32.55	16.58	17.90	17.28	21.60
3	50.00	83.00	0.415	2546.48	1.66	0.970	33.05	16.83	18.18	17.63	22.04

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